AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 34, 41, 72, 77, and 78 and cancel Claims 4 and 44 without prejudice or disclaimer, as shown below. In the changes made to the claims by the current amendment, deletions are double bracketed (e.g., [[deletions]]) or shown by strikethrough (e.g., ~~deletions~~), and additions are underlined (e.g., additions). This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (**Currently Amended**) A medical device for insertion into a bodily vessel to treat an intracranial aneurysm, the device comprising:

a mechanically expandable device, expandable from a first position to a second position-such that, in the second position, an exterior surface of the mechanically expandable device engages with an inner surface of the vessel so as to maintain a fluid pathway through the vessel; and

a porous membrane, expandable in response to expansion of the mechanically expandable device;

wherein at least a portion of the membrane is secured to the mechanically expandable device, such that a proximal end of the membrane is proximate to a proximal end of the mechanically expandable device, and a distal end of the membrane is proximate to a distal end of the mechanically expandable device; and

wherein the membrane has a substantially uniform porosity over a length extending from the distal end of the membrane to the proximal end of the membrane, the membrane having pores with a size between about 20 microns and about 100 microns and a distance between adjacent pores of the membrane being less than ~~about~~ 75 microns, the membrane having a width that is less than 0.001 inches; and

wherein, when the mechanically expandable device is expanded in the bodily vessel, adjacent to the aneurysm, the membrane is configured to:

(i) obstruct blood flow from the vessel into the aneurysm such that blood flow into the aneurysm is reduced; and

(ii) permit blood flow through pores in the membrane and into branch vessels arising from the bodily vessel so as not to inhibit blood supply functions of perforator vessels.

2. **(Previously Presented)** The medical device of claim 1, wherein a distance between adjacent pores is greater than about 40 microns.

3. **(Previously Presented)** The medical device of claim 1, wherein the membrane is made of a biocompatible and elastomeric polymer.

4. **(Canceled)**

5. **(Previously Presented)** The medical device of claim 1, wherein a ratio of a material surface area of the membrane is from about 25 to 75%.

6. **(Canceled)**

7. **(Previously Presented)** The medical device of claim 1, wherein the membrane is made from a polymeric material or a biodegradable material.

8. **(Previously Presented)** The medical device of claim 7, wherein the polymeric material or the biodegradable material forms multiple sub-layers mixed with drugs or reagents.

9. **(Previously Presented)** The medical device of claim 1, wherein the membrane isotropically expands.

10. **(Previously Presented)** The medical device of claim 1, wherein the membrane is disposed on an exterior surface of the mechanically expandable device.

11. **(Previously Presented)** The medical device of claim 1, wherein the membrane completely covers the exterior surface of the mechanically expandable device.

12. **(Previously Presented)** The medical device of claim 1, wherein the membrane circumferentially surrounds a portion of the mechanically expandable device.

13. **(Previously Presented)** The medical device of claim 1, wherein the membrane covers a portion of the mechanically expandable device.

14. **(Canceled)**

15. **(Previously Presented)** The medical device of claim 1, wherein the membrane is made from a solid polymer.

16. **(Previously Presented)** The medical device of claim 1, wherein the pores are fabricated.

17. **(Previously Presented)** The medical device of claim 16, wherein the pores are fabricated by laser drilling.

18. **(Canceled)**

19. **(Previously Presented)** The medical device of claim 1, wherein the membrane comprises a plurality of polymeric strips secured to the mechanically expandable device.

20. **(Previously Presented)** The medical device of claim 19, wherein the strips are less than 0.075 mm wide.

21. **(Previously Presented)** The medical device of claim 1, wherein the membrane comprises a mesh secured to the mechanically expandable device.

22. **(Previously Presented)** The medical device of claim 21, wherein an interstitial spacing of the mesh is less than 100 μm and a width of the meshing is between 0.025 to 0.050 mm.

23. **(Canceled)**

24. **(Previously Presented)** The medical device of claim 1, wherein the mechanically expandable device comprises a generally tubular structure having an exterior surface defined by a plurality of interconnected struts having interstitial spaces therebetween.

25. **(Previously Presented)** The medical device of claim 1, wherein the mechanically expandable device is self-expandable or balloon expandable.

26. **(Previously Presented)** The medical device of claim 1, wherein the mechanically expandable device comprises a stent.

27. **(Previously Presented)** The medical device of claim 24, wherein the membrane is supported by the generally tubular structure and is attached to at least one strut of the mechanically expandable device.

28. **(Previously Presented)** The medical device of claim 26, wherein the membrane is tubular; and wherein the membrane is disposed onto the outer surface of the stent or introduced by dip coating or spraying between the struts of the stent.

29. **(Previously Presented)** The medical device of claim 26, wherein the membrane is a segment of a tubular structure disposed onto a portion of an outer surface of the stent.

30. **(Previously Presented)** The medical device of claim 8, wherein the at least one drug or reagent is in a form selected from the group consisting of a solid tablet, a liquid, and a powder.

31. **(Previously Presented)** The medical device of claim 1, wherein at least one radiopaque marker is provided on the mechanically expandable device.

32. **(Previously Presented)** The medical device of claim 31, wherein the at least one radiopaque marker comprises gold or platinum.

33. **(Previously Presented)** The medical device of claim 31, wherein center radiopaque markers and end radiopaque markers are provided on the mechanically expandable device.

34. **(Currently Amended)** A medical device for treating a bifurcation or trifurcation intracranial aneurysm between at least two bodily vessels, the device comprising:

a first mechanically expandable device, expandable from a first position to a second position such that, in the second position, an exterior surface of the first mechanically expandable device is configured to engage an inner surface of a first branch vessel arising from a parent vessel so as to maintain a fluid pathway through the first branch vessel;

a second mechanically expandable device, expandable from a first position to a second position such that, in the second position, an exterior surface of the second mechanically expandable device is configured to engage an inner surface of a second branch vessel arising from the parent vessel so as to maintain a fluid pathway through the second branch vessel; and

a porous membrane, at least a portion of a proximate end of the membrane is secured to the first mechanically expandable device and a distal end of the membrane is secured to the second mechanically expandable device;

wherein the membrane has a substantially uniform porosity over a length extending from a distal end of the membrane to a proximal end of the membrane and a distance between adjacent pores of the membrane being less than ~~about~~ 75 microns, the membrane having a thickness that is less than 0.001 inches and a durometer of 75A Shore; and

wherein, when the first mechanically expandable device is expanded in the first branch vessel adjacent to the aneurysm and the second mechanically expandable device is expanded in the second branch vessel adjacent to the aneurysm, the membrane:

(i) obstructs blood flow into the aneurysm such that blood flow into the aneurysm is reduced; and

(ii) permits blood flow through pores in the membrane and into perforators and/or microscopic branches of brain arteries so as not to inhibit blood supply functions of perforator vessels.

35. **(Previously Presented)** A method of making the medical device of claim 1, the method comprising:

disposing the mechanically expandable device on a mandrel; and

disposing the membrane onto an outer surface of the mechanically expandable device.

36. **(Previously Presented)** A method of making the medical device of claim 24, the method comprising:

disposing the mechanically expandable device on a mandrel; and

incorporating the membrane between struts of the mechanically expandable device.

37–38. **(Canceled)**

39. **(Previously Presented)** The medical device of claim 34, wherein the membrane expands in response to expansion of the first mechanically expandable device.

40. **(Previously Presented)** The medical device of claim 34, wherein the membrane expands in response to expansion of the first and second mechanically expandable devices.

41. **(Currently Amended)** A medical device for insertion into a bodily vessel to treat an intracranial aneurysm, the device comprising:

a mechanically expandable device, expandable from a first position to a second position such that, in the second position, an exterior surface of the mechanically expandable device engages an inner surface of the vessel so as to maintain a fluid pathway through the vessel; and

a porous membrane, expandable in response to expansion of the mechanically expandable device;

wherein at least a portion of the membrane is secured to the mechanically expandable device, such that a proximal end of the membrane is proximate to a proximal end of the mechanically expandable device, and a distal end of the membrane is proximate to a distal end of the mechanically expandable device; and

wherein the membrane has a substantially uniform porosity over a length extending from the distal end of the membrane to the proximal end of the membrane and a distance between adjacent pores of the membrane being less than ~~about~~ 75 microns, the membrane having a thickness that is less than 0.001 inches and having a tensile strength of 7500 psi; and

wherein, when the mechanically expandable device is expanded in the bodily vessel, adjacent to the aneurysm, the membrane:

(i) obstructs blood flow from the vessel into the aneurysm such that blood flow into the aneurysm reduced; and

(ii) permits blood flow through pores in the membrane and into branch vessels arising from the bodily vessel so as not to inhibit blood supply functions of perforator vessels.

42. (**Previously Presented**) The medical device of claim 41, wherein a distance between adjacent pores is greater than about 40 microns.

43. (**Previously Presented**) The medical device of claim 41, wherein the membrane is made of a biocompatible and elastomeric polymer.

44. (**Canceled**)

45. (**Previously Presented**) The medical device of claim 41, wherein a ratio of a material surface area of the membrane is from about 25 to 75%.

46. (**Canceled**)

47. (**Previously Presented**) The medical device of claim 41, wherein the membrane is made from a polymeric material or a biodegradable material.

48. (**Previously Presented**) The medical device of claim 47, wherein the polymeric material or the biodegradable material forms multiple sub-layers mixed with drugs or reagents.

49. (**Previously Presented**) The medical device of claim 41, wherein the membrane is capable of isotropic expansion.

50. (**Previously Presented**) The medical device of claim 41, wherein the membrane is disposed on an exterior surface of the mechanically expandable device.

51. (**Previously Presented**) The medical device of claim 41, wherein the membrane completely surrounds the mechanically expandable device.

52. (**Previously Presented**) The medical device of claim 41, wherein the membrane circumferentially surrounds a portion of the mechanically expandable device.

53. (**Previously Presented**) The medical device of claim 41, wherein the membrane covers a portion of the mechanically expandable device.

54. (**Previously Presented**) The medical device of claim 41, wherein the membrane is made from a solid polymer.

55. **(Previously Presented)** The medical device of claim 41, wherein the pores are fabricated.

56. **(Previously Presented)** The medical device of claim 55, wherein the pores are fabricated by laser drilling.

57. **(Canceled)**

58. **(Previously Presented)** The medical device of claim 41, wherein the membrane comprises a plurality of polymeric strips secured to the mechanically expandable device.

59. **(Previously Presented)** The medical device of claim 58, wherein the strips are less than 0.075 mm and a distance between adjacent strips is less than 100 μm.

60. **(Previously Presented)** The medical device of claim 41, wherein the membrane comprises a mesh secured to the mechanically expandable device.

61. **(Previously Presented)** The medical device of claim 60, wherein a spacing of the mesh is less than 100 μm and a width of the meshing is between 0.025 to 0.050 mm.

62. **(Previously Presented)** The medical device of claim 41, wherein the mechanically expandable device comprises a generally tubular structure having an exterior surface defined by a plurality of interconnected struts having interstitial spaces therebetween.

63. **(Previously Presented)** The medical device of claim 41, wherein the mechanically expandable device is self-expandable or balloon expandable.

64. **(Previously Presented)** The medical device of claim 41, wherein the mechanically expandable device comprises a stent.

65. **(Previously Presented)** The medical device of claim 62, wherein the membrane is supported by the generally tubular structure and is attached to at least one strut.

66. **(Previously Presented)** The medical device of claim 65, wherein the membrane is tubular; and wherein the membrane is disposed onto the outer surface of the stent or introduced by dip coating or spraying between the struts of the stent.

67. **(Previously Presented)** The medical device of claim 66, wherein the membrane is a segment of a tubular structure disposed onto a portion of an outer surface of the stent.

68. **(Previously Presented)** The medical device of claim 48, wherein the at least one drug or reagent is in a form selected from the group consisting of a solid tablet, a liquid, and a powder.

69. **(Previously Presented)** The medical device of claim 41, wherein at least one radiopaque marker is provided on the mechanically expandable device.

70. **(Previously Presented)** The medical device of claim 69, wherein the at least one radiopaque marker comprises gold or platinum.

71. **(Previously Presented)** The medical device of claim 69, wherein center radiopaque markers and end radiopaque markers are provided on the mechanically expandable device.

72. **(Currently Amended)** A medical device for treating a bifurcation or trifurcation intracranial aneurysm between at least two bodily vessels, the device comprising:

a first mechanically expandable device, expandable from a first position to a second position such that, in the second position, an exterior surface of the first mechanically expandable device engages an inner surface of a first branch vessel arising from a parent vessel so as to maintain a fluid pathway through the first branch vessel;

a second mechanically expandable device, expandable from a first position to a second position such that, in the second position, an exterior surface of the second mechanically expandable device engages an inner surface of a second branch vessel

arising from the parent vessel so as to maintain a fluid pathway through the second branch vessel; and

a porous membrane, at least a portion of a proximate end of the membrane is secured to the first mechanically expandable device and a distal end of the membrane is secured to the second mechanically expandable device;

wherein the membrane has a substantially uniform porosity over a length extending from a distal end of the membrane to a proximal end of the membrane, and comprises pores with a size between about 20 microns and about 100 microns and a distance between adjacent pores of the membrane being less than ~~about~~ 75 microns, a thickness of the membrane being less than 0.001 inches; and

wherein, when the first mechanically expandable device is expanded in the first branch vessel adjacent to the aneurysm and the second mechanically expandable device is expanded in the second branch vessel adjacent to the aneurysm, the membrane:

(i) obstructs blood flow into the aneurysm such that blood flow into the aneurysm is reduced; and

(ii) permits blood flow through pores in the membrane and into perforators and/or microscopic branches of brain arteries so as not to inhibit blood supply functions of perforators vessels.

73. (**Previously Presented**) A method of making the medical device of claim 41, the method comprising:

disposing the mechanically expandable device on a mandrel; and

disposing the membrane onto an outer surface of the mechanically expandable device.

74. **(Previously Presented)** A method of making the medical device of claim 72, the method comprising:

disposing the mechanically expandable device on a mandrel; and

incorporating the membrane between struts of the mechanically expandable device.

75. **(Previously Presented)** The medical device of claim 72, wherein the membrane expands in response to expansion of the first mechanically expandable device.

76. **(Previously Presented)** The medical device of claim 72, wherein the membrane expands in response to expansion of the first and second mechanically expandable devices.

77. **(Currently Amended)** A medical device for insertion into a bodily vessel to treat an intracranial aneurysm, the device comprising:

a mechanically expandable device, expandable from a contracted position to an expanded position such that, in the expanded position, an exterior surface of the mechanically expandable device engages an inner surface of the vessel; and

a porous membrane, with a thickness that is less than 0.001 inches, expandable in response to expansion of the mechanically expandable device, the porous membrane:

(i) having a substantially uniform porosity over a length extending from a distal end of the membrane to a proximal end of the membrane and a distance between adjacent pores of the membrane being less than ~~about~~ 75 microns;

(ii) being secured to the mechanically expandable device, such that the proximal end of the membrane is proximate a proximal end of the mechanically expandable device, and the distal end of the membrane is proximate a distal end of the mechanically expandable device; and

(iii) being configured to, when expanded in the bodily vessel adjacent the aneurysm, reduce blood flow from the vessel into the aneurysm and permit blood supply to perforator vessels through pores of the membrane along the length of the membrane so as not to inhibit blood supply functions of perforator vessels.

78. (**Currently Amended**) A medical device for insertion into a bodily vessel to treat an intracranial aneurysm, the device comprising:

a mechanically expandable device, expandable from a first position to a second position such that, in the second position, an exterior surface of the mechanically expandable device is sized and configured to engage an inner surface of the vessel so as to maintain a fluid pathway through the vessel; and

a porous membrane, secured to the mechanically expandable device, having a substantially uniform porosity, the membrane, having a thickness that is less than 0.001 inches, being expandable in response to expansion of the mechanically expandable device and, when the mechanically expandable device is in the second position, the membrane comprising pores with a size between about 20 microns and about 100 microns and a distance between adjacent pores of the membrane being less than ~~about~~ 75 microns, such that the membrane reduces blood flow from the vessel into the aneurysm and permits blood supply to small branch vessels, branching from the vessel, through pores of the membrane so as not to inhibit blood supply functions of the small branch vessels.